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(21) International Application Number: PCT/FI99/00152 (22) International Filing Date: 26 February 1999 (26.02.99) (30) Priority Data: 980463 27 February 1998 (27.02.98) FI (71) Applicant (for all designated States except US): OY FINNISH IMMUNOTECHNOLOGY LTD. [FI/FI]; Lenkkeilijäntäkatu 8, FIN-33520 Tampere (FI). (72) Inventors; and (75) Inventors/Applicants (for US only): TÄHTINEN, Marja [FI/FI]; Kurunniitynkatu 2, FIN-33730 Tampere (FI). PETERSON, Pärt [EE/FI]; Kaskitie 13 F, FIN-33540 Tampere (FI). KROHN, Kai [FI/FI]; Salmentaantie 751, FIN-36450 Salmentaka (FI). RANKI, Päivi, Annamari [FI/FI]; Sibeliuksenkatu 11 B 28, FIN-00250 Helsinki (FI). (74) Agent: KOLSTER OY AB; Iso Roobertinkatu 23, P.O. Box 148, FIN-00121 Helsinki (FI).		(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: SELF-REPLICATING VECTOR FOR DNA IMMUNIZATION AGAINST HIV		
(57) Abstract <p>A nucleotide sequence encoding the HIV regulatory protein NEF, REV or TAT or an immunologically active fragment thereof is inserted into a vector comprising papilloma virus nucleotide sequences necessary and sufficient for long-term persistence. The resulting vectors are self-replicating and have a high copy number. They express the HIV genes in high amounts for a long period of time. The vectors elicit both a humoral and cell-mediated immune response and are therefore potential DNA immunization vaccines against HIV. The invention is directed to said vectors and vaccines and to a method for preparing the vectors. The invention is further directed to a host cell comprising the vector, to the use of the vector in the manufacture of a vaccine and to a method of preventing or treating HIV.</p>		

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